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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,773	06/28/2001	Shohei Moriwaki	57454-160	3426

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McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

SEALEY, LANCE W

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 02/13/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,773

Applicant(s)

MORIWAKI ET AL.

Examiner

Lance W. Sealey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,5,6,9,11,15,16 and 19 is/are allowed.
- 6) ☒ Claim(s) 3,4,7,8,13,14,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Allowed and Allowable Subject Matter

1. Claims 1, 5-6, 9, 11, 15-16 and 19 are allowed. No prior art anticipates or suggests a three-dimensional graphics drawing apparatus drawing an object based on color data wherein said transmittance setting unit uses a reciprocal of the depth coordinate value of the object to calculate the transmittance of the relevant object (claims 5 and 15), or wherein said transmittance setting unit sets the depth coordinate value of the object as the transmittance of the relevant object (claims 1 and 11). Claims 6 and 16 are allowed because they depend on claims 1 and 11, respectively, and claims 9 and 19 are allowed because they depend on claims 5 and 15, respectively.

Claim Rejections - 35 USC § 102

2. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all novelty-related rejections set forth in this Office action:

A person shall be entitled to a patent unless—

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 3-4, 7-8, 13-14 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Blank (U.S. Pat. No. 5,687,306).

4. Blank, in disclosing an image editing system, with respect to claim 3, also discloses a three-dimensional graphics drawing apparatus drawing an object based on color data and coordinate data, comprising:

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- a transmittance setting unit setting transmittance of the object based on a depth coordinate value included in said coordinate data (top-level gamma function **262**, FIG.3d—to be distinguished from background gamma function **266**, FIG.3d, which sets transmittance at a different depth value); and
- a drawing unit drawing the object based on the color data including the transmittance set by said transmittance setting unit and said coordinate data (existence is inherent based on “card is printed” step **288**, FIG.3d).

5. Blank further discloses the transmittance setting unit sets a monotone increasing function of the depth coordinate value of the object to calculate the transmittance of the relevant object. However, this element is disclosed by the Blank image editing system at col.20, ll.15-41 (a monotone increasing function is defined as $f(x)$ increasing as x increasing. This was illustrated in the specification (last paragraph of p.6) as the α value defined as a linear function of the Z-coordinate value with a positive coefficient so that a ratio of the α would change with respect to a Z-coordinate value.)

6. Regarding claims 4, 8, 14 and 18, Blank discloses the positive coefficient as 1 (Z varies directly with α on a one-to-one basis in col.20, ll.15-41).

7. With respect to claims 7 and 17, Blank discloses the transmittance setting unit calculating the transmittance of the object using the monotone increasing function of the depth coordinate value of the relevant object when the depth coordinate value of the relevant object is not greater

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than a threshold value, and sets a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object exceeds the threshold value (if Z is not greater than 7, and it is semitransparent, the transmittance values from Z=8 to Z=31 are set to transparent—see col.20, ll.28-30. Consideration for “the relevant object” is made, among other places, in col.19, l.66 to col.20, l.5.).

8. Finally, since claim 13 discloses all the claim elements as claim 3 except that claim 13 discloses a method rather than an apparatus, and a method is inherent in an apparatus, claim 13 is rejected in a manner similar to claim 3, and the claims which depend on claim 13 are rejected in a manner similar to the corresponding claims which depend on claim 3.

9. Therefore, in view of the foregoing, claims 3-4, 7-8, 13-14 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Blank.

10. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Paris, II (“Paris”, U.S. Pat. No. 5,088,054).

11. Paris, in disclosing a hidden surface removal system, also discloses a three-dimensional graphics drawing apparatus drawing an object based on color data and coordinate data including a depth coordinate value (col.2, ll.34-40), comprising: a color register storing the color data of the object (col.2, ll.40-41); a color data setting unit for setting the color data of the object in said color register when the depth coordinate value of the relevant object is not greater than a threshold value, and setting a prescribed value in said color register so that the object having a

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depth coordinate value greater than the threshold value is prevented from being displayed when the depth coordinate value of the relevant object exceeds the threshold value (col.2, ll.41-58.

The "setting of the color data in the color register when the depth coordinate value of the relevant object is not greater than a threshold value", meaning that the new object is closer to the viewer, occurs at ll.41-43; even if the depth coordinate value of the new object coming in to be compared is equal to the coordinate value, and the color data of the object is not changed, the color register is still "set" to the old value. It is obvious that a new object coming in having a depth coordinate value greater than the threshold (meaning further away from the viewer) would be prevented from being displayed, because the color and depth information would be rejected (i.e., not be saved). The "threshold value" is the relative depth of the old object at the subject point--see ll.49-51. The "prescribed value set in the color register" is the new color information--see ll.57-58.); and a drawing unit drawing the object based on the color data stored in said color register and said coordinate data (display system 136, FIG.21).

12. Therefore, in view of the foregoing, claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Paris.

Response to Remarks

13. The applicants' assertions with respect to cancelled claims 2 and 12, incorporated into claims 1 and 11, has been rendered moot because claims 1 and 11 have been allowed. In response to the applicants' assertions concerning claim 10, the explanation of the rejection of

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claim 10 has hopefully been clarified and adjusted for the new applicant claim language.

Conclusion

Any inquiry concerning this communication or earlier communications from the Office should be directed to the examiner, Lance Sealey, whose telephone number is (703) 305-0026. He can be reached from 7:00 am-3:30 pm EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

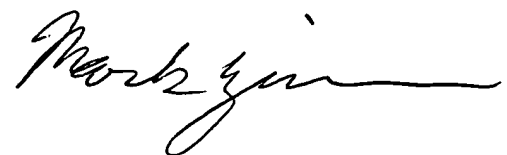
Any response to this action should be mailed to:

MS Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).



MARK ZIMMERMAN
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